

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP04/050405

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC 7	C07K14/805	C12N15/82	C12N15/29	C12N15/63
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According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7	C12N .C07K
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ, EMBASE, Sequence Search

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 98/12913 A (BAILEY JAMES E ; BULOW LEIF (SE)) 2 April 1998 (1998-04-02) cited in the application  examples 6,7,9 ----- WO 02/16655 A (SYNGENTA PARTICIPATIONS AG; SCRIPPS RESEARCH INST (US)) 28 February 2002 (2002-02-28) cited in the application SEQ ID NO:1274 page 3, line 20 - page 5, line 25 page 6, line 8 - line 21 page 9, line 26 - line 31 page 16, line 3 - line 15 page 104 ----- -/-</p>	1-3, 8-15, 17-21, 28-30
A		1-3, 8-15, 17-21, 28-30

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the International filing date
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the International filing date but later than the priority date claimed

"T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the International search report

9 September 2004

22.12.2004

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/050405

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/00597 A (UNIV MANITOBA (CA)) 6 January 2000 (2000-01-06) cited in the application  page 7, paragraph 3 - page 8, paragraph 1 page 2, line 28 - line 32 page 3, line 8 - page 4, line 1 page 4, line 9 - line 26 -----	1-3,8, 14,15, 17-21, 28,29
X	DATABASE EM_EST 18 August 2000 (2000-08-18), DE LOS REYES ET AL.: "SB48 Sugar Beet germination cDNA library Beta vulgaris cDNA clone ys016149 5' similar to a class 2 non-symbiotic hemoglobin, mRNA sequence." XP002295394 Database accession no. BE590299 cited in the application abstract -----	9-11,13
X	DATABASE EM_EST 14 December 2002 (2002-12-14), HERWIG R. ET AL.: "E012352-024-011-H14-SP6 MPIZ-ADIS-024-leaf Beta vulgaris cDNA clone 024-011-H14 5'-PRIME, mRNA sequence" XP002252725 Database accession no. BQ586966 cited in the application abstract -----	9-11,13
E	WO 2004/057946 A (MAX PLANCK GESELLSCHAFT) 15 July 2004 (2004-07-15)  SEQ ID NO:5 page 4, column 8 - column 26 page 13, column 23 - page 14, column 20 -----	1-3,8, 13,15, 17-21
A	US 6 372 961 B1 (TARCZYNSKI MITCHELL C ET AL) 16 April 2002 (2002-04-16) cited in the application  column 1, line 66 - column 2, line 9 column 11, line 7 - line 10 column 11, line 53 - line 58 column 12, line 28 - line 44 -----	1-3, 8-15, 17-21, 28-30
		-/-

## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP0004/050405

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	TREVASKIS B ET AL: "TWO HEMOGLOBIN GENES IN ARABIDOPSIS THALIANA: THE EVOLUTIONARY ORIGINS OF LEGHEMOGLOBINS" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE, WASHINGTON, US, vol. 94, October 1997 (1997-10), pages 12230-12234, XP002117102 ISSN: 0027-8424 cited in the application figure 1 -----	1-3, 8-15, 17-21, 28-30
A	HUNT P W ET AL: "Expression and evolution of functionally distinct haemoglobin genes in plants" PLANT MOLECULAR BIOLOGY, vol. 47, no. 5, November 2001 (2001-11), pages 677-692, XP002295393 ISSN: 0167-4412 cited in the application the whole document -----	1-3, 8-15, 17-21, 28-30

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International Application No.

PCT/EP2004/050405

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